REMARKS/ARGUMENTS

Claims 6-12 are pending in this application.

Claims 6-12 were rejected under 35 U.S.C. § 112, first paragraph, because the best mode contemplated by the inventors has allegedly not been disclosed. The Examiner alleged, "Evidence of concealment of the best mode is based upon the Applicant's failure to disclose the material of the plate-shaped element."

In addition, Claims 6-12 were rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite. Particularly, the Examiner alleged, "The claims describe the characteristics of the plate-shaped element but never cite the material of the element. A routineer in the art would have no idea whether or not he would be infringing on the language of a patent that had the Applicant's language since any material that meets the characteristics is applicable."

Applicant respectfully and strenuously traverses the rejections of Claims 6-12 under 35 U.S.C. § 112, first and second paragraphs.

There is absolutely no requirement whatsoever under U.S. patent law that a claim be unnecessarily limited by reciting a specific material. It is clearly proper to define a specific material by the function and/or properties that the material performs and/or possesses. As set forth in MPEP § 2173.05(g), the Examiner is reminded that "There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper." *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971).

Applicant's Claim 6 recites the feature of "a rectangular plate-shaped element including a functional part and a first frame-shaped electrode surrounding the functional part, wherein the coefficient of linear expansion in the x direction along a side of the rectangle is different from the coefficient of linear expansion in the y direction orthogonal to the x direction in the rectangular plane." Applicant respectfully submits that this feature is clear and definite, and that one of ordinary skill in the art could easily determine from the claimed feature that any material having different coefficients of

linear expansion in the x and y directions would read on this feature. As the Examiner is well aware, differences in coefficients of linear expansion, just as other physical differences between various materials, are notoriously well known to those of skill in the art and could easily be referenced and/or confirmed with a quick check of a simple look up table or text containing the very well known different physical characteristics such as coefficients of linear expansion of the different materials used to form electronic component devices.

Further, in the Response to Arguments section on page 2 of the outstanding Office Action, the Examiner alleged:

> While the Applicant notes that it is not necessary to define what material is employed in his invention, and supports that with the citation of MPEP § 2173.05(g), he does not refute that a routineer in the art "would have no idea whether or not he would be infringing on the language of a patent that had the Applicant's language since any material that meets the characteristics is applicable."

This allegation is clearly incorrect and grossly mischaracterizes Applicant's previous response.

On page 5 of the Amendment filed on November 7, 2008 and reproduced above, Applicant specifically **refuted** the Examiner's allegation by stating, "Applicant respectfully submits that this feature is clear and definite, and that one of ordinary skill in the art could easily determine from the claimed feature that any material having different coefficients of linear expansion in the x and y directions would read on this feature." Thus, contrary to the Examiner's allegation, Applicant clearly and specifically refuted the Examiner's allegation that a routineer in the art would have no idea whether or not he would be infringing on the language of a patent that had the Applicant's language since any material that meets the claimed characteristics could be used.

For the avoidance of doubt and to provide the Examiner with the specific language he apparently requires to understand Applicant's position, Applicant hereby again **REFUTES** the Examiner's allegation that a routineer in the art would have no idea

whether or not he would be infringing on the language of a patent that had the Applicant's language since any material that meets the characteristics is applicable. The Examiner's allegation is simply wrong and ignores the clear disclosure of specific materials contained in Applicant's originally filed application as discussed below.

In addition, in the Response to Arguments section on page 2 of the outstanding Office Action, the Examiner alleged, "As noted however the Applicant does not name the specific material of his components." This allegation is also clearly incorrect.

Although the specific materials used for the rectangular plate-shaped element are not recited in the claims, which is clearly not required by either of 35 U.S.C. § 112, first paragraph, or 35 U.S.C. § 112, second paragraph, paragraphs [0042] and [0043] of the Substitute Specification disclose, "The element 10 is a rectangular plate-shaped surface acoustic wave element," and "The element 10 includes a piezoelectric substrate 11 composed of quartz crystal, $LiTaO_3$, $LiNbO_3$, or the like and a functional part provided on the piezoelectric substrate 11. The functional part includes two pairs of IDTs 12 made of Al or the like and four input-output electrodes 13 made of Ti/Ni/Au."

Thus, contrary to the Examiner's allegation, Applicant does, in fact, name the specific materials used for the rectangular plate-shaped element 10. Therefore, the specification clearly complies with the requirements of 35 U.S.C. § 112, first and second paragraphs. In addition, contrary to the Examiner's allegations, the specification clearly discloses a best mode contemplated by the inventors. Applicant notes that there is absolutely no requirement whatsoever that the best mode be recited in the claims.

Just to be clear, Applicant hereby TRAVERSES the rejections of Claims 6-12 under 35 U.S.C. § 112, first and second paragraphs, and hereby REFUTES all of the Examiner's allegations in relation to the rejections of Claims 6-12 under 35 U.S.C. § 112, first and second paragraphs, because:

(1) Applicant's originally filed specification does in fact clearly disclose the best mode because the materials of the plate-shaped element are disclosed to include a piezoelectric substrate composed of quartz crystal, $LiTaO_3$, $LiNbO_3$,

or the like and a functional part including two pairs of IDTs made of Al or the like and four input-output electrodes made of Ti/Ni/Au, for example, although the claims are not limited to the best mode.

(2) A routineer in the art WOULD definitely have an idea and could easily and readily determine whether or not he would be infringing on the language of a patent that had the Applicant's language since an example of the material of the plate-shaped element is described in Applicant's specification, although the specific material is not recited in the claims since there is no such requirement to do so and the plate-shaped element is not limited to a single material.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections of Claims 6-12 under 35 U.S.C. § 112, first and second paragraph.

Claims 6-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaida (U.S. 5,302,880) in view of Shinoda (JP 57-60717). Applicant respectfully traverses the rejection of Claim 6-12.

Claim 6 recites:

> An electronic component device comprising:
> a rectangular plate-shaped element including a functional part and **a first frame-shaped electrode** surrounding the functional part, wherein the coefficient of linear expansion in the x direction along a side of the rectangle is different from the coefficient of linear expansion in the y direction orthogonal to the x direction in the rectangular plane;
> a substrate including **a second frame-shaped electrode** arranged on a front face of the substrate at a position so as to correspond to the first frame-shaped electrode; and
> **a solder sealing frame provided on the surface of at least one of the first frame-shaped electrode and the second frame-shaped electrode**; wherein
> each of the first frame-shaped electrode, the second frame-shaped electrode, and the solder sealing frame includes a strip-shaped portion extending in the x direction and a strip-shaped portion extending in the y direction;
> the element and the substrate are bonded together with the solder

> sealing frame, the functional part provided on the element is hermetically sealed in a space formed between the element and the substrate; and **when the difference in expansion in the x direction between the element and the substrate is represented by Q_x and the difference in expansion in the y direction between the element and the substrate is represented by Q_y, in each of the first frame-shaped electrode, the second frame-shaped electrode, and the solder sealing frame, a width of the strip-shaped portion extending in the direction having the larger difference in expansion is smaller than a width of the strip-shaped portion extending in the direction having the smaller difference in expansion**. (emphasis added)

Applicant's Claim 12 recites features that are similar to the features recited in Applicant's Claim 6, including the above-emphasized features.

With the unique combination and arrangement of features recited in Applicant's Claims 6 and 12, including the feature of "a first frame-shaped electrode, "a second frame-shaped electrode," and " when the difference in expansion in the x direction between the element and the substrate is represented by Q_x and the difference in expansion in the y direction between the element and the substrate is represented by Q_y, in each of the first frame-shaped electrode, the second frame-shaped electrode, and the solder sealing frame, a width of the strip-shaped portion extending in the direction having the larger difference in expansion is smaller than a width of the strip-shaped portion extending in the direction having the smaller difference in expansion," Applicant has been able to provide an electronic component device satisfying the lifetime for thermal shock resistance required for general electronic component devices and having excellent reliability. (See, for example, paragraph [0005] of the Substitute Specification).

The Examiner alleged that Kaida teaches all of the features recited in Applicant's Claims 6 and 12, except for a solder sealing frame and a surface acoustic wave device. The Examiner further alleged that [Shinoda] teaches the "use of solder for sealing an electronic package containing a piezoelectric resonator, which description includes both high frequency devices and surface acoustic wave devices." Thus, the Examiner

concluded, "It would have been obvious to one having ordinary skill in the art to employ the solder material of [Shinoda] in the device of Kaida since this is an excellent design to allay problems of thermal shock as noted in the Abstract [of Shinoda]." Applicant respectfully disagrees.

Applicant notes that the Examiner inadvertently referred to "Kusabiraki et al." in the body of the rejection of Applicant's Claims 6-12, and clearly should have correctly referred to "Shinoda" as identified in the statement of the rejection. Accordingly, Applicant has referred herein to "Shinoda" instead of "Kusabiraki et al."

Contrary to the Examiner's allegations, Kaida fails to teach or suggest that either of the frame members 35 and 36 of Kaida, which the Examiner alleged correspond to the first and second frame-shaped electrodes recited in Applicant's Claims 6 and 12, are or could define an electrode. Since by definition, an electrode must be electrically conductive, and neither of the frame members 35 and 36 of Kaida are disclosed as being either an electrode or being made of electrically conductive material, Kaida certainly cannot be fairly construed as teaching or suggesting the features of "the first frame-shaped electrode" and "the second frame-shaped electrode" as recited in Applicant's Claims 6 and 12.

In addition, Kaida fails to teach or suggest anything at all regarding the relative widths of the strip-shaped portion extending in the x direction and in the y direction of the frame members 35 and 36. Thus, Kaida clearly fails to teach or suggest the features of "when the difference in expansion in the x direction between the element and the substrate is represented by Q_X and the difference in expansion in the y direction between the element and the substrate is represented by Q_Y, in each of the first frame-shaped electrode, the second frame-shaped electrode, and the solder sealing frame, a width of the strip-shaped portion extending in the direction having the larger difference in expansion is smaller than a width of the strip-shaped portion extending in the direction having the smaller difference in expansion" as recited in Applicant's Claim 6, and similarly in Applicant's Claim 12.

Shinoda was relied upon merely to teach a solder sealing frame, and certainly fails to teach or suggest the feature of "when the difference in expansion in the x direction between the element and the substrate is represented by Q_x and the difference in expansion in the y direction between the element and the substrate is represented by Q_y, in each of the first frame-shaped electrode, the second frame-shaped electrode, and the solder sealing frame, a width of the strip-shaped portion extending in the direction having the larger difference in expansion is smaller than a width of the strip-shaped portion extending in the direction having the smaller difference in expansion" as recited in Applicant's Claim 6, and similarly in Applicant's Claim 12.

In the Response to Arguments section on page 3 of the outstanding Office Action, the Examiner alleged that Figs. 2(A) and 2(B) of Shinoda teach frame-shaped electrodes 11a and 12a. However, in the description of the rejection of Claims 6-12 under 35 U.S.C. § 103(a) as being unpatentable over Kaida in view of Shinoda, the Examiner has failed (1) to allege that Shinoda teaches or suggests frame-shaped electrodes, and instead, alleged that Kaida teaches these features; (2) to allege that it would have been obvious to include the alleged frame-shaped electrodes 11a and 21a of Shinoda in the device of Kaida; (3) explain how the alleged frame-shaped electrodes 11a and 21a of Shinoda would be physically combined and operative in the device of Kaida; and (4) to provide any reason, incentive, or motivation which would have led one of ordinary skill in the art to include the alleged frame-shaped electrodes 11a and 21a of Shinoda in the device of Kaida.

Thus, regardless of whether or not Shinoda teaches or suggests the features of "a first frame-shaped electrode" and "a second frame-shaped electrode," the Examiner has clearly failed to establish a *prima facie* case of obviousness in the rejection of Claims 6-12 under 35 U.S.C. § 103(a) as being unpatentable over Kaida in view of Shinoda.

In fact, there would have been no reason, incentive, or motivation whatsoever to replace the frame-shaped members 35 and 36 of Kaida with the alleged frame-shaped

electrodes 11a and 21a of Shinoda. If the frame-shaped members 35 and 36 of Kaida were replaced with alleged frame-shaped electrodes 11a and 21a of Shinoda, then the electrode structure (6, 7, 12a, 12b) of Kaida would be short-circuited by the alleged frame-shaped electrodes of Shinoda, thus rendering the device of Kaida inoperative and unsatisfactory for its intended purpose. The Examiner is reminded that if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) and MPEP § 2143.01.

Accordingly, Applicant respectfully submits that Kaida and Shinoda, applied alone or in combination, fail to teach or suggest the unique combination and arrangement of features recited in Applicant's Claims 6 and 12.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claims 6 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Kaida in view of Shinoda.

In view of the foregoing remarks, Applicant respectfully submits that Claims 6 and 12 are allowable. Claims 7-11 depend upon Claim 6, and are therefore allowable for at least the reasons that Claim 6 is allowable.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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/Christopher A. Bennett, #46,710/
Attorneys for Applicant

KEATING & BENNETT, LLP
1800 Alexander Bell Drive, Suite 200
Reston, VA 20191
Telephone: (571) 313-7440
Facsimile: (571) 313-7421

Joseph R. Keating
Registration No. 37,368

Christopher A. Bennett
Registration No. 46,710